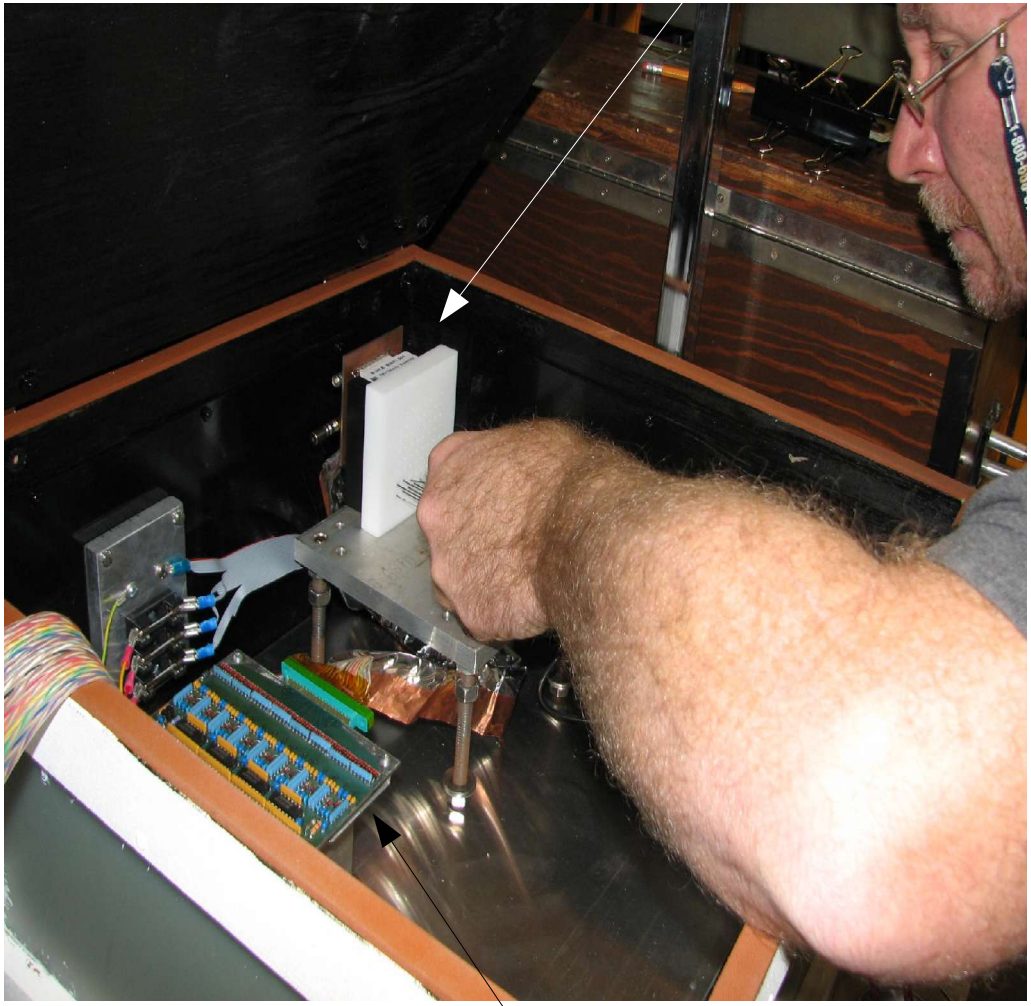
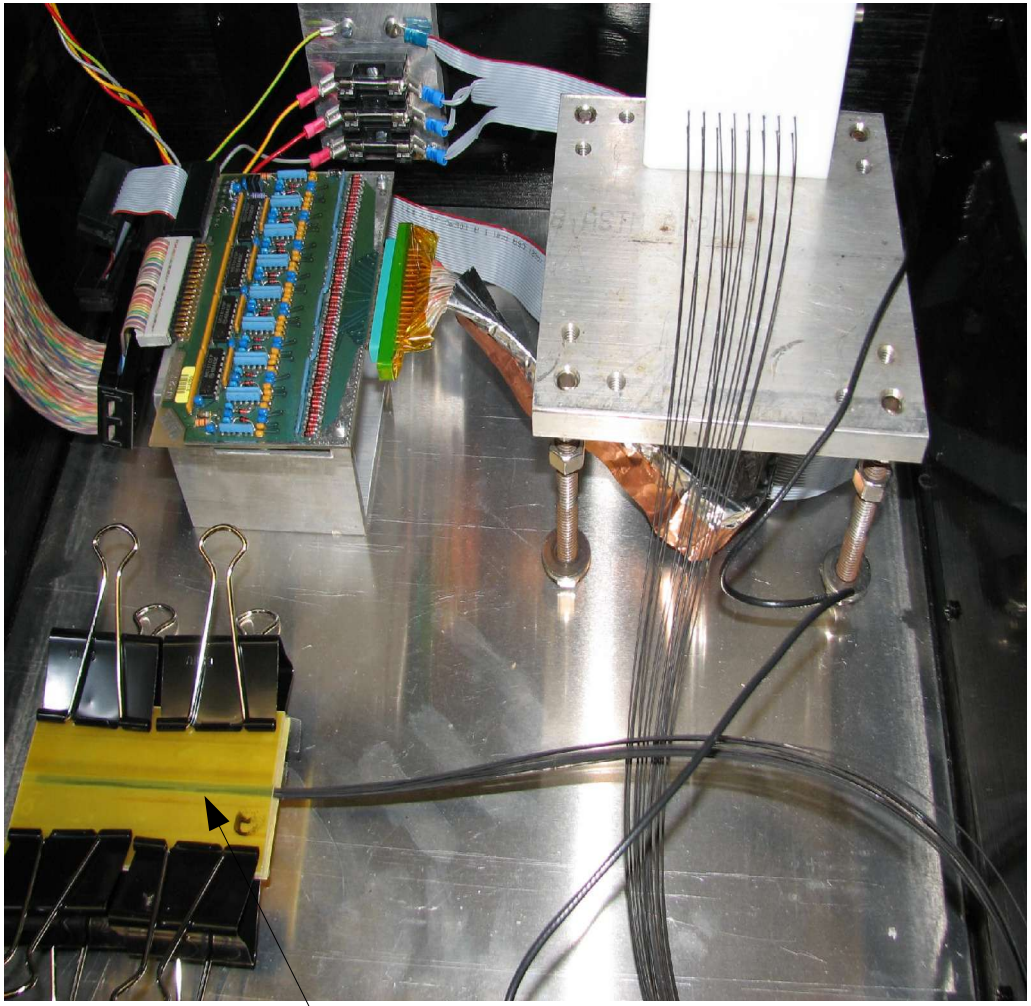
Burle Multianode
MCP PMT

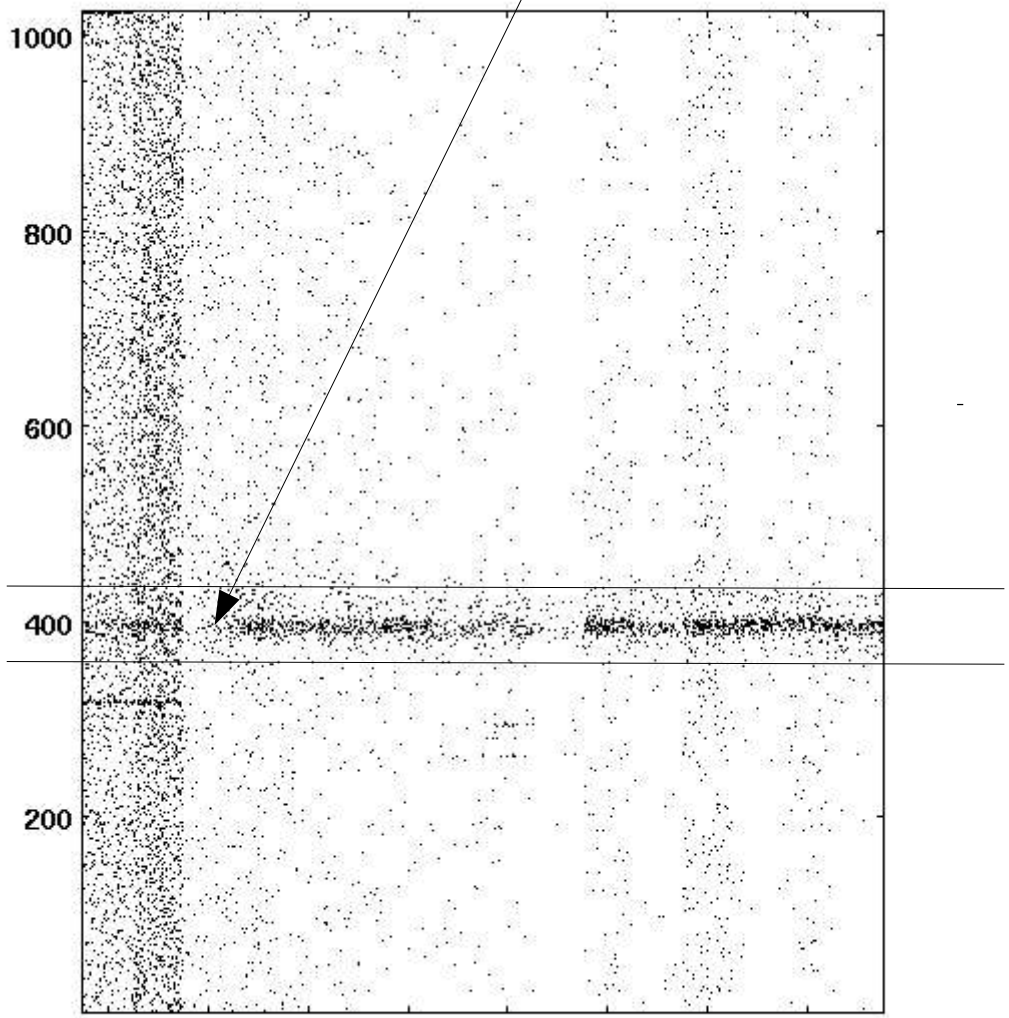




Nanometrics N277
amplifier-discriminator

Mini-scintillating fiber
cosmic teststand

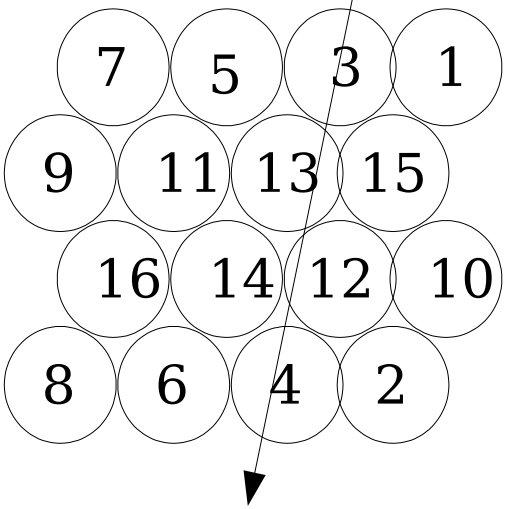
Band indicates
Intime Hits



TDC value

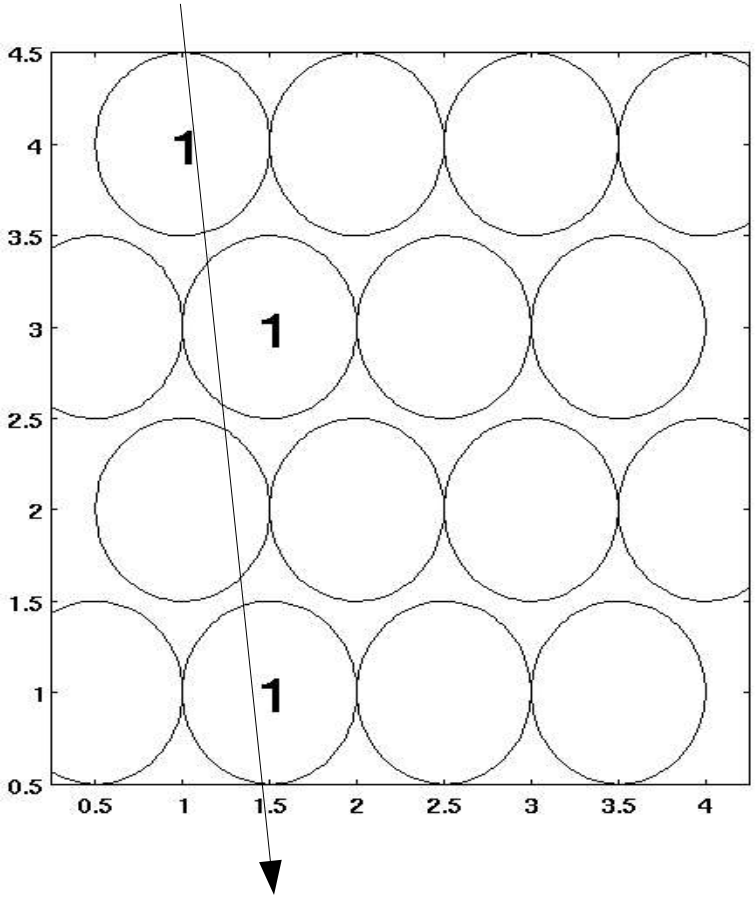
TDC channel: 1 – 16

Mini-
scintillating
fiber cosmic
teststand

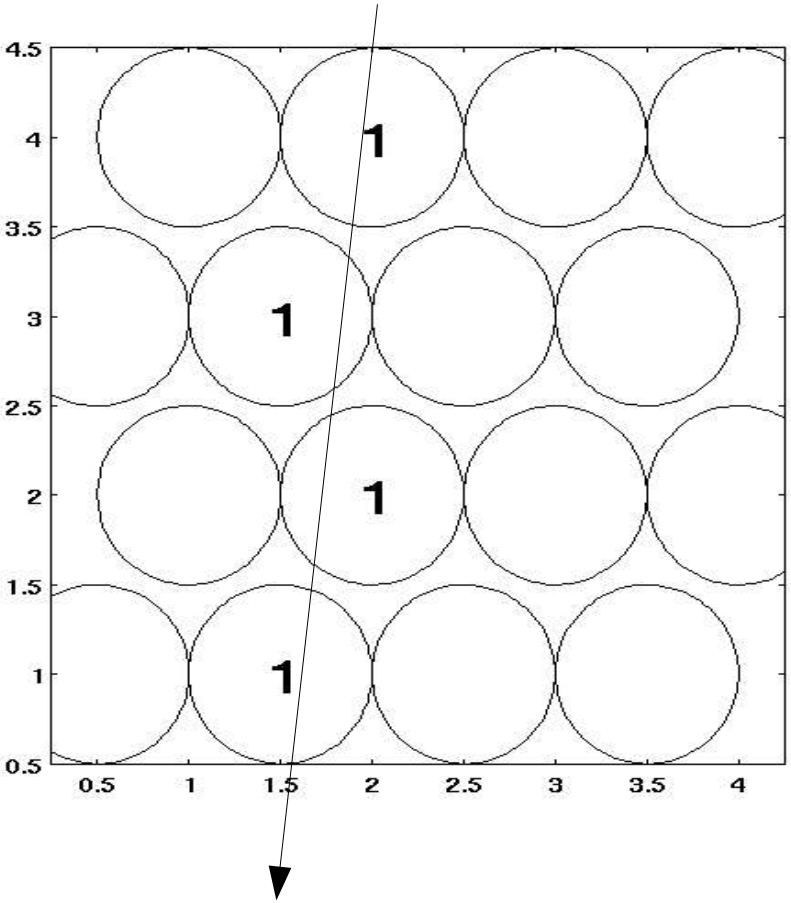


Numbers indicate
mapping between fiber
and TDC channel

Event picture showing inefficient layer



Picture of perfect event (all 4 layers hit)



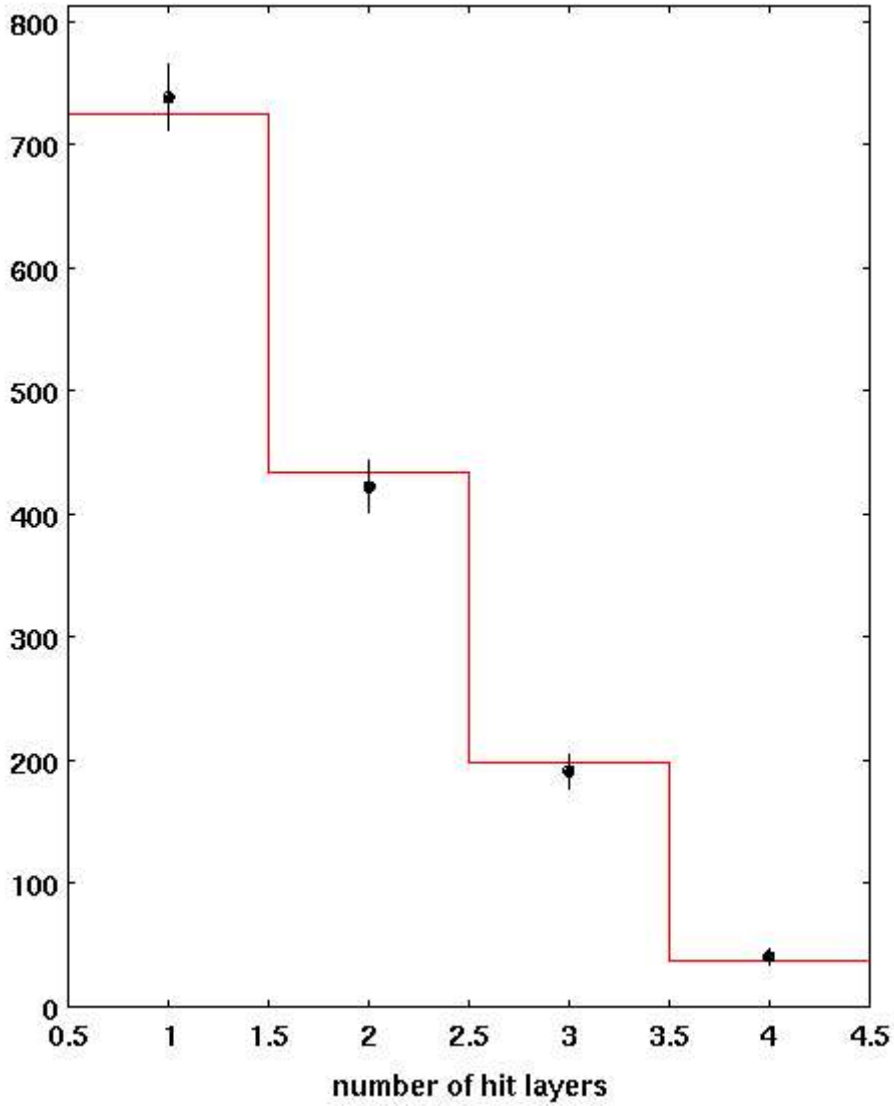
System parameters:

Burle Multianode MCP PMT HV = -2300
(Gain = 800000)

Nanometrics N277 threshold = 1.86 microamps

Estimated Discriminator Threshold = 5 pe

Measured efficiency of each fiber to Mips ~ 40%



Data from run 1053 (dots)

HV = -2300 (Gain=800000)

Discriminator
Threshold = 1.5 volts

Effective threshold = ~ 5 pe

Simulation (Red Histogram)

Fitted Parameters	Value
Geometrical Acceptance of fiber Plane to MIP	1%
Random Electronic Noise Term per Plane	0.6%
Plane Efficiency to MIP	41%
Average Light output For MIP going through a single plane of fibers.	~ 5 pe.